

CHAPTER 13. HAZARDOUS ENERGY CONTROL PROGRAM (LOCKOUT/TAGOUT)

1300. GENERAL. This chapter establishes FAA policy and minimum requirements for locking out and/or tagging out sources of energy to equipment or systems under the requirements of the U.S. Department of Labor, Occupational Safety and Health Administration's (OSHA) *Control Of Hazardous Energy (Lockout/Tagout)* Standard, 29 CFR 1910.147. The FAA Hazardous Energy Control (Lockout/Tagout) Program shall be used to control hazardous energy during installation, servicing, modification, and maintenance work. Following the practices in this chapter will help prevent injuries and property damage due to unexpected energization, startup, release of stored energy, and sudden movement of equipment components.

1301. SCOPE. This chapter applies to all FAA personnel. This includes, but is not limited to, employees involved in design, acquisition, installation, modification, alteration, maintenance, and service work on machines, equipment, and systems. FAA contractors and subcontractors must comply with the requirements of this chapter.

1302. POLICY. It is the policy of the FAA that before any employee performs any servicing, modification, alteration, or maintenance on a machine or equipment where the unexpected energizing, startup, or release of stored energy could occur and cause injury, the machine or equipment shall be isolated and rendered inoperative through the use of a lockout device whenever the machinery or equipment is capable of being locked out. If an energy-isolating device is not capable of being locked out, a tagout procedure consistent with the requirements of this chapter shall be utilized that provides full employee protection equivalent to that of a lockout procedure. Lockout/tagout shall only be performed by authorized employees. All new equipment designed, ordered, and installed and any replacement or major repair, modification, alteration, or renovation to existing machines or equipment must be equipped with the capacity for lockout.

1303. DEFINITIONS.

a. Affected employee. An FAA employee whose job requires him/her to operate or use a machine or equipment on which servicing or maintenance is being performed under lockout or tagout, or whose job requires him/her to work in an area in which such servicing or maintenance is being performed. Affected employees who are not directly involved in but are present during maintenance or service activities shall be verbally notified of lockout/tagout procedures and their significance.

b. Authorized employee. An FAA employee who locks out or tags out machines or equipment to perform servicing, modification, alteration, or maintenance on that machine or equipment. An affected employee becomes an authorized employee when that employee's duties include performing servicing or maintenance as defined in paragraph 1303k. In general, all technicians, mechanics, aircraft maintenance technicians, aerospace engineering technicians, etc., or any persons authorized to service and/or certify equipment may be authorized employees.

c. Capable of being locked out. An energy-isolating device is capable of being locked out if it has a device, hasp, or other means of attachment to which or through which, a lock can be affixed, or it has a locking mechanism built into it. Other energy-isolating devices are capable of being locked out if lockout can be achieved without the need to dismantle, rebuild, or replace the energy-isolating device or permanently alter its energy control capability.

d. Energized. Connected to an energy source or containing residual or stored energy.

e. Energy-isolating device. A mechanical device that physically prevents the transmission or release of energy, including but not limited to the following: a manually operated electrical circuit breaker; a disconnect switch; a manually operated switch by which the conductors of a circuit can be disconnected from all ungrounded supply conductors and, in addition, no pole can be operated independently; a line valve; a block; and disconnects, gate valves, gas regulators, and any similar device used to block or isolate energy. Push buttons, selector switches, and other control circuit-type devices ARE NOT energy-isolating devices.

f. Energy source. Any source of energy, several of which are: electrical, mechanical, hydraulic, kinetic, pneumatic, ionizing or non-ionizing radiation, chemical, thermal, gravitational, or other energy.

g. Hasp. A metal piece fitted over a staple and fastened as by a bolt or padlock.

h. Lockout. The placement of a lockout device on an energy-isolating device, in accordance with an established procedure, ensuring that the energy-isolating device and the equipment being controlled cannot be operated until the lockout device is removed.

i. Lockout device. Hardware that utilizes a positive means like a lock, either key or combination type, to hold an energy-isolating device in the safe position and prevent the energizing of a machine or equipment. Included are blank flanges and bolted slip blinds.

j. Normal production operations. The utilization of a machine or equipment to perform the intended function(s).

k. Servicing, modification, alteration, and/or maintenance. Workplace activities like constructing, installing, setting up, adjusting, inspecting, modifying, and maintaining and/or servicing machines or equipment. These activities include lubrication, cleaning or unjamming of machines or equipment, and making adjustments or tool changes, where the employee may be exposed to the unexpected energization or startup of the equipment or release of hazardous energy. Note: Minor tool changes and adjustments and other minor servicing activities, which take place during normal production operations, are not covered if they are routine, repetitive, and integral to the use of the equipment for production, provided that the work is performed using alternate measures that provide effective protection.

l. Tagout. The placement of a tagout device on an energy-isolating device, in accordance with an established procedure, to indicate that the energy-isolating device and the equipment being controlled may not be operated until the tagout device is removed.

m. Tagout device. A prominent warning device, capable of withstanding environmental stresses, such as a tag and a means of attachment, which can be securely fastened to an energy-isolating device in accordance with an established procedure, to indicate that the energy-isolating device and the equipment being controlled may not be operated until the tagout device is removed.

1304. KEY PROGRAM ELEMENTS.

a. Documented Program. A documented lockout/tagout program must be developed and implemented in accordance with 29 CFR 1910.147 whenever installation, maintenance, modification, alteration, or servicing of machines, equipment, or systems will be accomplished by FAA employees. The documented program must contain each of the key elements specified in paragraph 1304.

b. Designated Program Manager. A lockout/tagout program manager shall be appointed and documented to coordinate overall implementation and oversight of the region/center Lockout/Tagout Program.

c. Lockout/Tagout Procedures. Procedures shall be developed, documented, and utilized for the control of potentially hazardous energy in accordance with 29 CFR 1910.147, whenever FAA employees are engaged in servicing, modification, alteration, or maintenance of machines or equipment, except for those situations specifically excluded in paragraph (i), “Exceptions to Lockout/Tagout Requirements.” The procedures shall clearly and specifically outline the scope, purpose, authorization, rules, and techniques to be utilized for lockout/tagout and the means to ensure compliance, including:

(1) Specific procedural steps for starting-up, shutting down, isolating, blocking, securing, and tagging out all machines or equipment to control hazardous energy and verifying each step.

(2) Specific procedural steps for the placement, removal, and transfer of lockout devices or tagout devices and the responsibility for them. If an energy-isolating device is not capable of being locked out, the device will be modified when possible. If the device cannot be modified, then and only then will tagout procedures be allowed.

(3) Specific requirements for testing a machine or equipment to determine and verify the effectiveness of lockout devices, tagout devices, and other energy control measures.

(4) Specific procedures for locating and contacting employees who have left the job site without properly removing their locks/tags, and for documenting those attempts. The documentation will be sent to the second line supervisor for review. If the authorized employee cannot remove the lock/tag for any reason, the only other person that can do so will be the authorized employee’s supervisor.

d. Training and Communications.

(1) All affected and authorized personnel, and their supervisors, shall receive training on the contents of the FAA Lockout/Tagout Program consistent with the requirements of 29 CFR 1910.147. Retraining shall be provided for all authorized and affected employees whenever there is a change in job assignments, a change in machines, equipment, processes, or systems that present a new hazard, when there is a change in the FAA lockout/tagout procedures, or whenever inadequacies are discovered in the performance of lockout/tagout. FAA supervisors shall certify that employee training has been accomplished, has been documented, and is kept up-to-date.

(2) Procedures for lockout/tagout shall be included in all training courses for equipment and facilities, including FAA Academy courses, where it is necessary to control hazardous energy for maintenance, modification, alteration, or service activities.

(3) All training shall be properly documented in the agency’s official training information system. Documentation shall include a written certification record that contains the name or other identifier of the employee trained, the date(s) of the training, and the signature of the competent person who performed the training.

e. Protective Materials and Hardware. All protective materials and hardware used must meet the requirements of 29 CFR 1910.147. Additionally:

(1) Locks, tags, chains, wedges, key blocks, adapter pins, self-locking fasteners, or other hardware shall be provided only to authorized FAA employees for isolating, securing, or blocking machines or equipment from energy sources.

(2) Lockout devices and tagout devices shall be singularly identified; shall be the only device(s) used for controlling energy; shall not be used for other purposes; and shall be durable, substantial, and identifiable, i.e., the lock or an attached tag shall indicate the identity of the employee applying the device(s).

(3) Locks shall be a personal issue item (i.e., issued to a single individual as personal property).

f. Group Lockout. When servicing and/or maintenance is performed by more than one person, a procedure shall be provided that affords the employees a level of protection equivalent to that provided by the implementation of a personal lockout or tagout device. When an energy-isolating device cannot accept more than one single lock, a multiple lockout/tagout device will be used. Primary responsibility shall be assigned to an authorized employee who shall be designated to coordinate affected work forces and ensure continuity of protection. Specific procedures shall be provided for shift personnel to ensure the continuity of lockout or tagout protection, including provision for the orderly transfer of lockout or tagout devices between off-going and oncoming personnel, to minimize the possibility of unexpected energization, start-up of the machine or equipment, or release of stored energy.

g. Periodic Inspections and Reviews.

(1) Periodic inspections of a facility's energy control procedures shall be conducted at least annually, in accordance with OSHA requirements in 29 CFR 1910.147, by an authorized employee (other than the authorized employee utilizing the energy control procedures being inspected), and after any incident involving the unexpected release of hazardous energy. Authorized employees conducting inspections shall document compliance and non-compliance with the requirements of the OSHA standard. Where lockout or tagout is used for energy control, the periodic inspections shall include a discussion between the reviewer and affected and authorized employees of their responsibilities under the energy control procedure being reviewed.

(2) Managers shall review facilities or areas under their control at least annually for overall compliance with facility lockout/tagout requirements and certify that the periodic inspections have been performed. Reviews shall be documented and include identified deficiencies, trends, corrective actions required, and tracking for abatement.

h. Requirements for Contractors or Other Outside Personnel.

(1) All contracts issued for work involving hazardous energy control (lockout/tagout) procedures must contain a provision that contractors must have a hazardous energy control (lockout/tagout) program in accordance with OSHA and state requirements. Contractor hazardous energy control (lockout/tagout) programs shall be submitted in accordance with contract requirements.

(2) Contractors must provide their own appropriate hazardous energy control (lockout/tagout) equipment and training, and the contractor is responsible for ensuring that all subordinate contractor personnel understand and comply with the lockout/tagout program and procedures. The FAA shall not issue locks, tags, or other equipment to contractors and shall not train contractor personnel.

(3) Whenever contractors or other outside servicing personnel (e.g., Port Authority or telephone company personnel) are engaged in work covered by 29 CFR 1910.147, the responsible management officials of the outside organization and the FAA shall provide each other with their respective lockout/tagout programs prior to the commencement of work. A copy of the contractor's/company's lockout/tagout program shall be provided to the contracting officer's technical representative (COTR) for coordination with the appropriate FAA personnel.

i. Exceptions to Lockout/Tagout Requirements.

(1) The FAA's Hazardous Energy Control Program provides for certain exceptions to lockout/tagout. Exceptions include, but are not limited to:

(a) Electrical equipment whose maximum voltage is less than 50 volts to ground, provided there will be no exposure to electric burns or explosions.

(b) Routine production operations where workers are not required to remove or bypass a guard or other safety device, or are not required to place any part of their bodies into an area of the machine or equipment where work is actually performed upon the material being processed (point of operation).

(c) Electrical equipment that can be de-energized by unplugging; the person performing the maintenance has exclusive control of the plug.

(d) Hot tap operations as defined by 29 CFR 1910.147.

(2) Under certain conditions energy may be isolated by other devices to prevent the release of hazardous energy. The devices, such as blanks, blocks, line valves, etc., do not require locks or tags, but must prevent the release of the stored energy. Mechanical or electrical items like push buttons, selector switches, or other circuit control devices are not considered to be energy-isolating devices.

(3) Troubleshooting, testing, and/or diagnostics on electrical or electronic equipment may not be able to be performed using lockout/tagout. In such cases, qualified employees are permitted to perform these functions, under the requirements of 29 CFR 1910, Subpart S, and 29 CFR 1910.331-.335. Procedures must be developed to protect FAA employees adequately from the electrical hazard when testing, troubleshooting, and/or performing diagnostics on equipment that is not de-energized.

j. Design and Acquisition.

(1) An assessment to determine application of 29 CFR 1910.147 is required whenever new equipment is designed, acquired, and installed or whenever replacements are made in existing systems. In existing systems, an assessment shall be done on major replacement equipment at the time of installation, for consideration of equipment requirements and impact on the entire system. Upon completion of the assessment, lockout capability must be designed into the equipment, if required, and installed prior to delivery or installation and use by FAA employees.

(2) All contracts issued for work involving hazardous energy control (lockout/tagout) procedures must contain a provision that contractors must have a hazardous energy control (lockout/tagout) program in accordance with OSHA and state requirements. Safety programs shall be submitted in accordance with contract requirements.

(3) Contractors must provide their own appropriate hazardous energy control (lockout/tagout) equipment and training. FAA will not issue locks, tags, or other equipment to contractors.

(4) All equipment installed after January 2, 1990, must accommodate the use of a lock.

(5) The written lockout/tagout program must include a process to evaluate the requirements for energy-isolating devices whenever major replacement, repair, renovation, alteration, or modification of machines, equipment, or systems is performed and whenever new equipment is designed and installed.

1305-1399. RESERVED.

